

The Builder.

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UCH of our readers as attempt—stern in the pursuit of knowledge—to master the "Second Report from the Select Committee on Ventilation and Lighting of the House [of Commons]; together with the Proceedings of the Committee, Minutes of Evidence, Appendix, and Index," will find it a tough job. It fills 670 pages, the greater part of it, as, humbly, it seemeth to us, the merest verbiage and twaddle that ever nation had to pay for printing. Lots of sack, and only a "ha'porth" of bread. If it were not for the look of the thing, we should be disposed to paraphrase Colton's arithmetical apophorism concerning Shakespeare and modern dramatists, and say,—subtract from the big book all that is to be found in *The Builder*, and—rubbish remains. Modest, we are forced to admit, but true nevertheless,—“true as touch,” as Spenser has it. On one point nearly all the witnesses, with the exception of those that might be depended on, are agreed, and that is the want of the first necessary and condition for life in the new House of Commons. Mr. Gurney finds “the atmosphere of the House in a diseased and *ferruginous* state, and subject to constant disturbance from initial and retrograde currents passing in all directions, apparently at random and without control, producing direct draughts in particular parts of the House and oppression in others.” Members of the House gave evidence that they always expected a head-ache when they were going into it, and were never disappointed. Mr. Leslie considers that “drawing air down long open brickwork shafts, pulling it by means of powerful steam-engines along damp, dirty cellars and vaults, moistening it, causing it to pass over heated iron surfaces, tempering, moistening, and equalising it, destroys all the original freshness and purity of the air, and forms a most deteriorated mechanical mixture, combining dust and other impurities, which, apart from other considerations, produce an atmosphere most injurious to the health and comfort of those who are compelled to breathe it.” Mr. Price undertakes to say, that the air, before it reaches the House of Commons, is rendered unfit for respiration by the contamination it meets with as it travels from the towers into the House. Mr. Denker thinks that the system adopted is bad, because it is “opposed to the natural principles of ventilation, forcing the air contrary to its natural movement, and requiring the constant application of powerful machinery to obtain results that may be obtained by allowing the air to take its natural course.” And together the last two witnesses depose that the supply of air “is insufficient in quantity,” the temperature “irregular and conflicting,” and the quality of the air “so inferior, as to be unfit for respiration!”

The inquiry further proves, what is useful to be known, that we are still floundering in ignorance of this subject, and that opinions diametrically opposite, and in some cases dan-

gerous to deadliness, are entertained by men who have the confidence of large numbers of persons.

The committee were evidently posed. They worked hard: some of them put pertinent questions, and tried to get at principles; but with small results, and the consequence is a report which leaves the real question very nearly where it was, excepting by negation. The report says,—

“Your committee are of opinion that the condition of the ventilation of the House of Commons and its appendages is still unsatisfactory, notwithstanding the improvement which has been effected in the House itself since the period when the committee were appointed.

“Much of the inconvenience in regard to ventilation has arisen from the want of a proper understanding between Sir C. Barry and Dr. Reid, to whom the superintendence of different parts of the building has been confided; and the committee are of opinion, that for the future, divided responsibility should be avoided, and that the ventilation of the Houses of Parliament should be placed in the charge of one person only.”

As to the system,—

“The plan of forcing air into a building by mechanical power, to produce what is called plenum or plus ventilation, combined with the extracting powers of a shaft with furnace or steam jet to effect what is termed vacuum ventilation, with ascending and descending currents for the supply of fresh air and the abstraction of vitiated air, is, in the opinion of your committee, a complicated system, and one which they are not prepared to approve.

“The vaults used for the purpose of transmitting the air to the House of Commons are liable to be affected by damp and impurities arising from bad drainage; and unless this evil be effectually remedied these vaults ought not to be used as air channels.

“The air is deteriorated at times by over heating, which it experiences when in contact with the iron pipes, heated, some by steam, others by hot water, contributing to produce the disagreeable taste and smell which has been complained of. This disturbance of the wholesome condition of the atmosphere renders complicated manipulation necessary to restore the balance, an operation attempted in both the systems adopted in the New Palace, and, in the opinion of your committee, without success.”

They find that—

“One of the causes of defective ventilation in the House of Commons is the want of a sufficient area of openings at the floor of the House, and the necessity which thence has arisen for admitting the air through the interstices of the carpet. This operation, it is found, causes the dust to rise with the ascending current of air, and produces grave inconveniences. Your committee is, therefore, of opinion that the openings for the admission of air at or near the floor of the House should be so enlarged, as not to require any portion of the air to be drawn through the fibres of the carpet, which never can be free from dust and other impurities.”

But still they are able to say that the “committee desire to give it as their opinion that the failure of ventilation of the House of Commons, at the commencement of the session, cannot fairly be imputed to any radical defect in Dr. Reid's system, because the House was hastily occupied, with an infinity of arrangements incomplete; and the lighting, from which the greatest amount of mischief arose, was neither contrived by Dr. Reid nor under his control.”

They are of opinion that much improvement would be effected by an enlargement of the openings, both for the supply and discharge of air; but the only recommendation that they make, “in the present conflicting state of opinion,” is, as regards future management, that “the entire responsibility of ventilating and lighting the house, and its appendages, should be confided to one competent person, under the direction and supervision of the Board of Works; and with a view to secure proper attention to any complaints that may hereafter arise, a committee should be named,

at the commencement of each session, to confer with the Board of Works upon any measures that may appear necessary to remove such complaints.”

Of our own opinion of the costly and complicated machinery introduced at the new Houses to fight in some cases against nature, and with no chance of success, our readers are aware.

One of the most scientific of the witnesses, Mr. Gurney, actually got so near common notions on one occasion as to suggest, that opening the windows would let in and let out a considerable quantity of air, should it be wanted! And when Mr. Henry Hope then naturally asked: “May we from your evidences draw the conclusion, that after having laid out 200,000*l.* on ventilating the House, no better plan is to be devised than that of opening the windows?” The witness replied: “You can devise plans, and you may change the system: the question before us, I take it, is one applicable to the present state of the building. I say, it is not worth while to interfere with the system as we find it: I would not, to alter the system of ventilation, go to a great expense, and upset the building: I would be content to introduce the means at hand, which appear to me self-evident would get rid of those evils which temporarily obtain, and which may only occasionally be felt.”

As to that portion of the system, whether applied by Sir Charles Barry or Dr. Reid, which attempts to bring in the supply of pure air from the ceiling, we are forced to regard it as a dangerous error. It astonished us to find Dr. Arnott countenancing it by assenting to the assertion that good ventilation may be obtained by the introduction of cold air from the top, and the egress of vitiated air through the floor. “It has the advantage, he said, of blowing down the dust; but there is the disadvantage of the unequal descent of the pure air.”

To this Lord Palmerston sensibly observed, —“Let us see whether there would not be other inconveniences attending that system. The air which is breathed by persons sitting in the House of Commons who sit near the floor, is heavier by its specific gravity, but lighter in consequence of the increase of temperature which it receives when it quits the human body: this bad air is constantly rising by its temporary rarefaction. At the same moment, you have a stratum of air, naturally lighter, but heavier by its temperature, descending. These two currents meet in some portion of the building, and that bad air which has been breathed must, sooner or later, be brought back again to the mouths of the persons who have already breathed it, before it can pass through the apertures of the floor; whereas, if the egress of the air were at the ceiling, that air, having once quitted the mouths of the persons who had exhaled it, never would return to them, but would be carried off, and they would receive a constant supply of purer air from the apertures in the lower part of the building. Would not that be so?” The reply was,—“Your Lordship has expressed, only in better words, one of the reasons which I gave for preferring the ascent of the air from below to the other mode. Yet the difficulty referred to may be in great part overcome by increasing the amount and speed of the pure downward current.”

The Doctor did not venture to approve of